

WHAT IS CLAIMED IS (US) :

1. A pen input/display device, comprising:

an input pen enabling a pen input on a display panel;  
infrared transmission means and ultrasonic  
transmission means provided on the input pen;

infrared receive means and at least two ultrasonic  
reception means, provided on the display panel, receiving  
an infrared signal and an ultrasonic signal simultaneously  
transmitted respectively from the infrared transmission  
means and the ultrasonic transmission means provided on  
the input pen, when a pen tip of the input pen is in contact  
with the display panel; and

display control means computing a contact position of  
the pen tip on the display panel from a result, containing a  
time delay, of receiving the ultrasonic signal by the at least  
two ultrasonic reception means with reference to a time  
when the infrared receive means receives the infrared  
signal,

said input pen including pen pressure sensor means  
sensing pen pressure when the pen tip is in contact with  
the display panel; and pen pressure information infrared  
transmission control means controls the infrared  
transmission means transmit the infrared signal which  
changes in accordance with the pen pressure.

2. The pen input/display device as set forth in claim 1, wherein the pen pressure information infrared transmission control means controls the infrared transmission means to transmit the infrared signal with varied pulse widths in accordance with the pen pressure.

3. The pen input/display device as set forth in claim 2, wherein:

the input pen further includes sequence input means enabling inputs of a series of pen pressure levels as sorted by frequency of use; and

the pen pressure information infrared transmission control means controls the infrared transmission means to transmit the infrared signal with pulse widths which grow longer in descending sequence of frequency of use of individual pen pressure levels as sorted through the sequence input means.

4. The pen input/display device as set forth in claim 1, wherein the pen pressure information infrared transmission control means controls the infrared transmission means to transmit at least two infrared pulses an interval between which changes in accordance with the pen pressure.

5. The pen input/display device as set forth in claim 1, wherein the pen pressure information infrared transmission control means outputs multiple infrared signal pulses in accordance with the pen pressure.

6. The pen input/display device as set forth in claim 1, wherein the infrared signal represents bit data.

7. The pen input/display device as set forth in claim 5, wherein:

the input pen further includes sequence input means enabling inputs of a series of pen pressure levels as sorted by frequency of use: and

the pen pressure information infrared transmission control means controls the infrared transmission means to transmit the infrared signal over infrared signal output periods which grow longer in descending sequence of frequency of use of individual pen pressure levels as sorted through the sequence input means.

8. The pen input/display device as set forth in claim 6, wherein:

the input pen further includes sequence input means enabling inputs of a series of pen pressure levels as sorted

by frequency of use; and

the pen pressure information infrared transmission control means controls the infrared transmission means to transmit the infrared signal over infrared signal output periods which grow longer in descending sequence of frequency of use of individual pen pressure levels as sorted through the sequence input means.